

THE CLAIMS

What is claimed is:

1. A clamping tool for clamping a workpiece to a support by means of a bar system constructed of a number of mutually pivotal bars and comprising an activation bar for making the bars pivot mutually between an initial position and a locking position, a clamping bar having at least one thrust shoe for pressing against the workpiece in the locking position, and a base for mounting the bar system on the support, wherein the bar system furthermore comprises at least two toggle joints arranged to substantially simultaneously assume a dead point position when the bar system is taken from the initial position to the locking position, and further wherein said two toggle joints form an angle with each other in the dead point positions.
2. The clamping tool according to claim 1, wherein the two joints of each toggle joint together form an angle that points its point in the opposite direction of the at least one clamp shoe in the initial position of the bar system.
3. The clamping tool according to claim 1, wherein the two joints and respectively of each toggle joint together form an angle that point its point in a direction towards the at least one clamp shoe in the locking position of the bar system.
4. The clamping tool according to claim 3, wherein the angle that the two joints and respectively of each toggle joint form together in the locking position of the bar system is between 175° and 180° , preferably between 177° and 180° , and especially between 178° and 180° .
5. The clamping tool according to claim 1, wherein the bar system comprises a first swivel connection for pivotally journaling one end of the activation bar in the base while the other end of the activation bar is free and serves as handle for the clamping tool; a rocking bar which at one end is pivotally journaled in the base via a second swivel connection which is nearer the at least one clamp shoe than the first swivel connection and at the other end is pivotally journaled in the clamping bar via a third swivel connection; a first toggle joint having a first joint which at one end is pivotally journaled in the clamping

bar via a fourth swivel connection which is farther from the at least one clamp shoe than the third swivel connection and at the other end is pivotally journaled in the activation bar via a fifth swivel connection, and a second joint consisting of the part of the activation bar that is extending from the fifth to the first swivel connection; and a second toggle joint having a first joint which at one end is pivotally journaled in the rocking bar and/or clamping bar via a sixth swivel connection and at the other end is pivotally journaled in the activation bar via a seventh swivel connection which in the locking position of the clamping tool is nearer the at least one clamp shoe than the first and the fifth swivel connection, and a second joint consisting of the part of the activation bar that is extending between the seventh and the first swivel connection.

6. The clamping tool according to claim 5, wherein the third and the sixth swivel connection coincide.

7. The clamping tool according to claim 5, wherein the sixth swivel connection is placed on the rocking bar between the second and the third swivel connection.

8. The clamping tool according to claim 1, wherein the first and the second toggle joint pass the dead point positions simultaneously when the bar system is taken from its initial position to its locking position.

9. The clamping tool according to claim 1, wherein the first and the second toggle joint do not pass the dead point positions simultaneously when the bar system is taken from its initial position to its locking position.

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10. The clamping tool according to claim 1, wherein the first joint of the first and second toggle joint respectively is shaped as a U having a bottom and two sides.

11. A clamping tool comprising:
a base member;
a bar system mounted to the base member and comprising a plurality of mutually pivotal bars including:

an activation bar pivotally mounted to the base member and being provided with a handle member;

a racking bar also pivotally mounted to the base member and operatively connected to the activation bar via a first toggle joint; a clamping bar operatively connected to the activation bar via a second toggle joint and being pivotally mounted to said racking bar;

wherein the first and second toggle joints substantially simultaneously assume respective dead point positions, when the bar system is moved from a first, unlock position to a second, locked position.

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12. The clamping tool according to claim 11, further comprising first and second clamping surfaces formed on the clamping member, said first and second clamping surfaces being directed substantially perpendicular to one another.

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13. The clamping tool according to claim 12, further comprising first and second screws engaged to said clamping member wherein a first clamping surface is formed on said first screw and said second clamping surface is formed on said second screw.

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